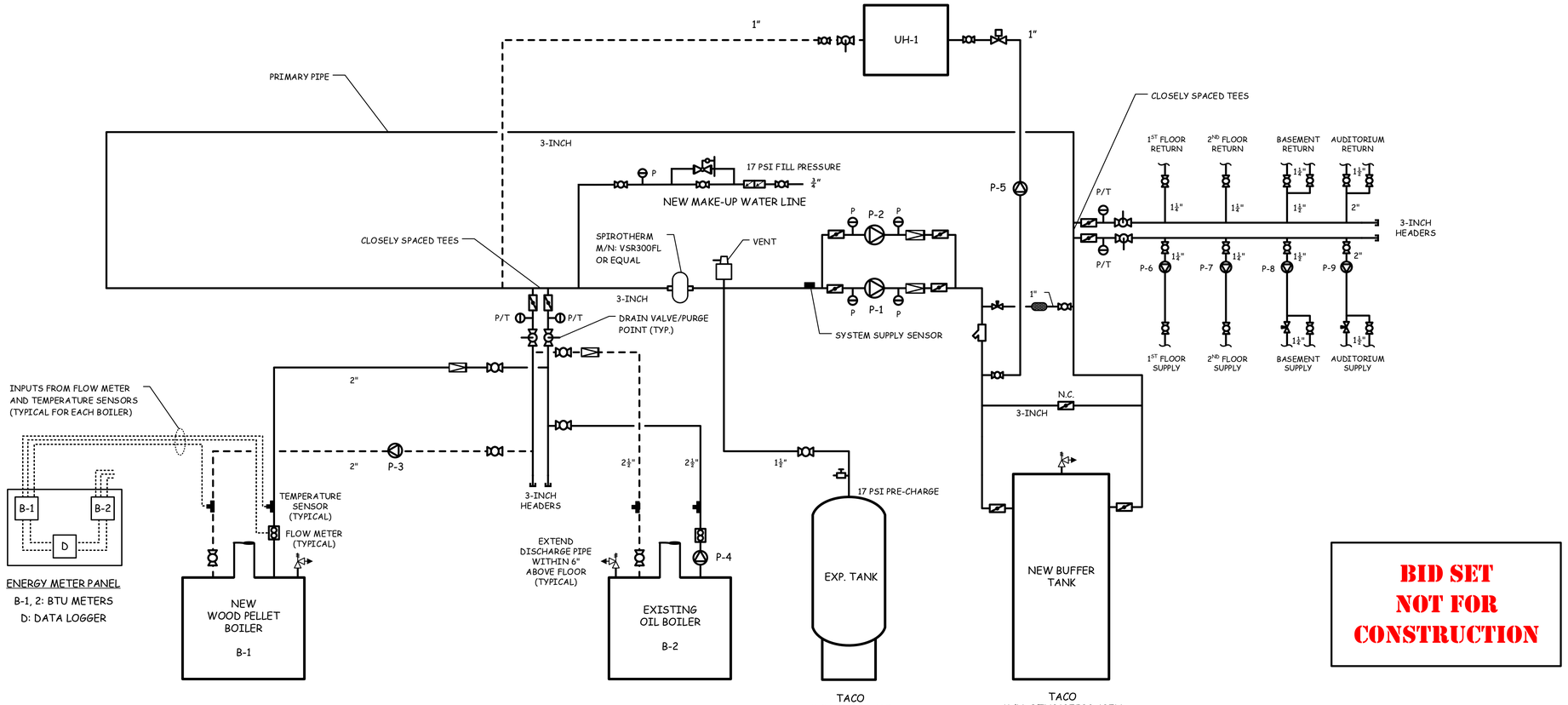


BID SET
NOT FOR
CONSTRUCTION

BOILER NO.	LOCATION	OUTPUT (MBH)	AFUE EFF. (%)	ELECTRICAL	BOILER MANUFACTURER/MODEL	REMARKS
B-1	MECH. RM.	191	85.9	208 VAC/1 PH/60 HZ	OKOFEN, PES56	WOOD PELLET, ATMOSPHERIC, 14 AMP FOR VACUUM SUCTION **(INITIALLY CONFIGURE BOILER FOR AN OUTPUT OF 164 MBH)**
B-2	MECH. RM.	500	82.1 EST.	120 VAC/1 PH/60 HZ	PEERLESS, SCT-09-W	EXISTING, FUEL OIL, ATMOSPHERIC

PUMP SCHEDULE (BASE SCOPE)

PUMP NO.	DESCRIPTION	LOCATION	PUMP DATA GPM	PUMP DATA HEAD	PUMP DATA RPM	ELECTRICAL DATA VOLTS	ELECTRICAL DATA PH	ELECTRICAL DATA HZ	ELECTRICAL DATA HP	MANUFACTURER MODEL	NOTES
P-1	PRIMARY LOOP	MECH. RM.	76.6	12.1	VAR.	115	1	60	0.68	TACO VR15	VARIABLE SPEED, 1-1/2" FLANGED
P-2	PRIMARY LOOP	MECH. RM.	76.6	12.1	VAR.	115	1	60	0.68	TACO VR15	VARIABLE SPEED, 1-1/2" FLANGED
P-3	B-1 BOILER LOOP	MECH. RM.	25	7.6	3250	115	1	60	1/8	TACO 0012-IFC	2" FLANGED
P-4	B-2 BOILER LOOP	MECH. RM.	57.5	6.4	VAR.	115	1	60	0.68	TACO VR15	VARIABLE SPEED, 1-1/2" FLANGED
P-5	MECH. RM. UNIT HTR.	MECH. RM.	6.3	7.3	3250	115	1	60	1/25	TACO 008-IFC	1" FLANGED
P-6	1ST FLOOR ZONE	MECH. RM.	REUSE EXISTING CIRCULATOR								
P-7	2ND FLOOR ZONE	MECH. RM.	REUSE EXISTING CIRCULATOR								
P-8	BASEMENT ZONE	MECH. RM.	REUSE EXISTING CIRCULATOR								
P-9	AUDITORIUM ZONE	MECH. RM.	REUSE EXISTING CIRCULATOR								

PUMP SCHEDULE (ALTERNATE NO. 1)

PUMP NO.	DESCRIPTION	LOCATION	PUMP DATA GPM	PUMP DATA HEAD	PUMP DATA RPM	ELECTRICAL DATA VOLTS	ELECTRICAL DATA PH	ELECTRICAL DATA HZ	ELECTRICAL DATA HP	MANUFACTURER MODEL	NOTES
P-6	1ST FLOOR ZONE	MECH. RM.	11.8	23.4	3250	115	1	60	1/6	TACO 0013-IFC	1-1/4" FLANGED
P-7	2ND FLOOR ZONE	MECH. RM.	3.0	24.8	3250	115	1	60	1/8	TACO 009-IFC	1-1/4" FLANGED
P-8	BASEMENT ZONE	MECH. RM.	10.5	24.7	3250	115	1	60	1/6	TACO 0013-IFC	1-1/2" FLANGED
P-9	AUDITORIUM ZONE	MECH. RM.	14.8	19.1	3250	115	1	60	1/6	TACO 0013-IFC	1-1/2" FLANGED

UNIT HEATER	LOCATION	OUTPUT (MBH)	FLOW (GPM)	ELECTRICAL	MANUFACTURER/MODEL	REMARKS
UH-1	MECH. RM.	60	6.3	115 VAC/1 PH/60 HZ 1/8 HP/1625 RPM	MODINE, HC-86	FINGERPROOF FANGUARD, SOLID STATE MOTOR SPEED CONTROLLER

VALVE TYPE	HEATING ZONE	EQUIPMENT TYPE/LOCATION	QTY	MANUFACTURER/MODEL	REMARKS
ZONE VALVE	MECHANICAL ROOM	MECHANICAL ROOM	1	TACO, Z075T2	3/4" NPT, NORMALLY CLOSED, 10.3 Cv

Notes:

1. THE DISTANCE BETWEEN THE CENTERS OF THE CLOSELY SPACED TEES SHALL NOT EXCEED 4 TIMES THE NOMINAL DIAMETER OF THE PRIMARY PIPE. A MINIMUM OF 8 PRIMARY PIPE DIAMETERS OF STRAIGHT PIPE SHALL BE INSTALLED UPSTREAM OF THE FIRST TEE AND A MINIMUM OF 4 PRIMARY PIPE DIAMETERS DOWNSTREAM OF THE SECOND TEE.
2. EXPANSION TANK; MAKE-UP WATER LINE TO BE INSTALLED BY LICENSED PLUMBER IN ACCORDANCE WITH MA PLUMBING CODE.
3. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.
4. USE BELL REDUCERS WHERE PIPE SIZE DIFFERS FROM PUMP FLANGE CONNECTION.
5. DESIGN IS BASED ON THE SPECIFIED EQUIPMENT. INSTALLATION DETAILS AND SYSTEM MODIFICATIONS REQUIRED AS A RESULT OF SUBMITTING AN ACCEPTABLE EQUIVALENT IS THE RESPONSIBILITY OF THE INSTALLING CONTRACTOR AND CONSIDERED PART OF THE BASE SCOPE OF WORK.
6. USE DIELECTRIC SEPARATORS FOR CONNECTION OF ALL DISSIMILAR METALS.

Legend:

- PUMP
- BUTTERFLY VALVE
- BALL VALVE
- SWING CHECK VALVE
- FC FLOW CHECK VALVE
- DRAIN VALVE
- BALANCING VALVE
- ZONE VALVE
- MAGNETIC FILTER
- PRESSURE RELIEF VALVE
- VENT
- N.C. NORMALLY CLOSED

Project:

TOWN OF NORTHFIELD
NORTHFIELD TOWN HALL
WOOD PELLET BOILER PROJECT

Drawing Title:

MECHANICAL SCHEMATIC

BOWMAN
ENGINEERING, INC.

P.O. Box 410
Greenfield, MA 01302
Phone: (413) 303-0238
Fax: (413) 604-0139

Prepared by:	Date	Rev.	Scale	Drawing No.
TPB	10-23-15	R00	None	**M-1**

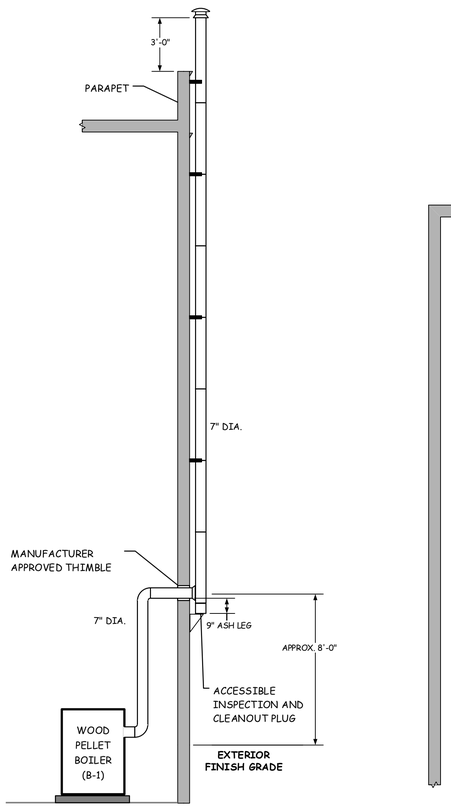
VENTING NOTES

1. CONNECTORS SHALL MAINTAIN A PITCH OR RISE OF AT LEAST ¼ IN/FT OF HORIZONTAL LENGTH OF PIPE FROM THE APPLIANCE TO THE CHIMNEY.

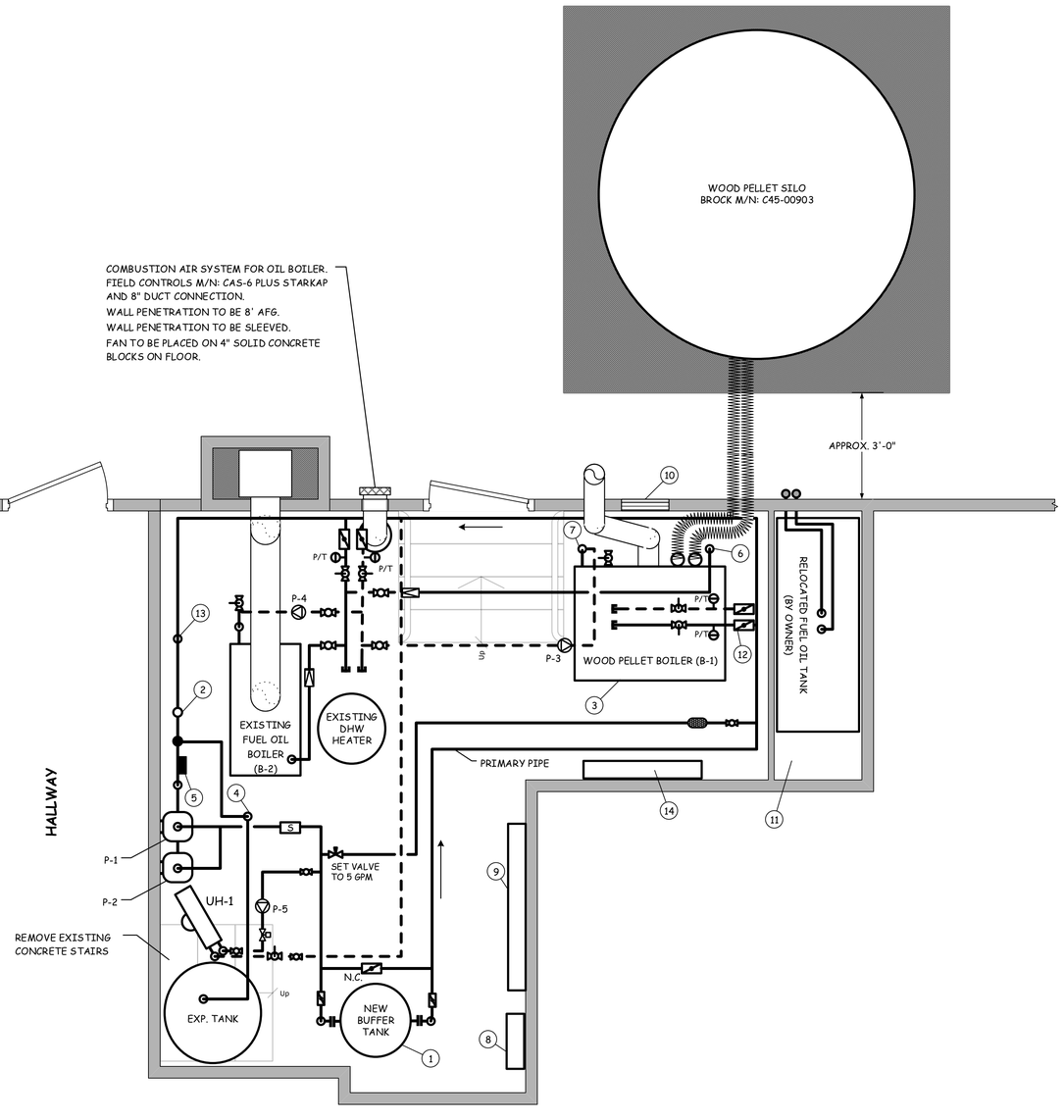
2. THE ENTIRE LENGTH OF CONNECTORS SHALL BE ACCESSIBLE FOR INSPECTION, CLEANING AND REPLACEMENT. THIS SHALL INCLUDE A REMOVAL PLUG AT THE BOTTOM OF THE OUTSIDE RISER TO ALLOW FOR INSPECTION AND CLEANING OF THE OUTSIDE PORTION OF THE VENTING SYSTEM.

3. THE WOOD PELLET BOILER CONNECTOR SHALL INCLUDE A BAROMETRIC DAMPER FURNISHED AND INSTALLED BY CONTRACTOR.

4. NEW FACTORY BUILT CHIMNEY SHALL RUN UP ALONG SIDE OF THE BUILDING IN ACCORDANCE WITH MANUFACTURER REQUIREMENTS AND SHALL NOT BLOCK ANY WALL PENETRATIONS OR WINDOWS.



CHIMNEY DETAIL
WOOD PELLET BOILER
(SCALE: ¼ IN = 1 FT)



MECHANICAL ROOM
(SCALE: ½ IN = 1 FT)

BID SET
NOT FOR
CONSTRUCTION

General Notes

1. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURERS' REQUIREMENTS. THE DESIGN IS BASED ON SPECIFIED EQUIPMENT. INSTALLATION DETAILS AND SYSTEM MODIFICATIONS REQUIRED AS A RESULT OF SUBMITTING AN ACCEPTABLE EQUIVALENT MANUFACTURER IS THE RESPONSIBILITY OF THE INSTALLING CONTRACTOR AND CONSIDERED PART OF THE CONTRACT SCOPE OF WORK.

2. THE DISTANCE BETWEEN THE CENTERS OF THE CLOSELY SPACED TEES SHALL NOT EXCEED 4 TIMES THE NOMINAL DIAMETER OF THE PRIMARY PIPE. A MINIMUM OF 8 PRIMARY PIPE DIAMETERS OF STRAIGHT PIPE SHALL BE INSTALLED UPSTREAM OF THE FIRST TEE AND A MINIMUM OF 4 PRIMARY PIPE DIAMETERS DOWNSTREAM OF THE SECOND TEE.

3. PIPE UNIONS SHALL BE USED FOR ALL EQUIPMENT CONNECTIONS.

4.DRAWING IS DIAGRAMMATIC ONLY AND MEANT TO CONVEY DESIGN INTENT. EXACT LOCATION OF EQUIPMENT AND ROUTING OF PIPING SHALL BE COORDINATED WITH THE CODE AND EQUIPMENT REQUIREMENTS AND FIELD CONDITIONS.

5. ANY EQUIPMENT, PIPING OR COMPONENTS NOT REUSED IN THE NEW DESIGN SHALL BE DISPOSED OF BY THE CONTRACTOR IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

6. ALL PIPING SHALL BE FIELD RUN AND SHALL BE ALIGNED AND PARALLEL TO THE WALLS OF THE BUILDING.

7. INSTALL PETCOCK ON ALL PRESSURE AND TEMPERATURE INSTRUMENT BRANCH CONNECTIONS.

8. ALL FLOOR MOUNTED EQUIPMENT TO BE PLACED ON 4 IN. SOLID CONCRETE BLOCKS.

9. SEE SCHEMATIC DRAWING FOR LINE SIZES OF NEW PIPING.

10. USE BELL REDUCERS WHERE PIPE SIZE DIFFERS FROM PUMP FLANGE CONNECTION.

Notes

1. BUFFER TANK; SEE SCHEMATIC DRWG FOR PIPING ARRANGEMENT OF VALVES AND SPECIALTIES.

2. AIR ELIMINATOR.

3. SEE SCHEMATIC DRWG FOR NEAR BOILER PIPING ARRANGEMENT OF VALVES AND SPECIALTIES (TYPICAL FOR EACH BOILER).

4. HYDRONIC EXPANSION TANK; SEE SCHEMATIC DRWG FOR PIPING ARRANGEMENT OF VALVES AND SPECIALTIES.

5. SYSTEM SUPPLY SENSOR.

6. FLOW METER ON DROP (TYPICAL FOR BOTH BOILERS).

7. SHUTOFF VALVE AND TEMPERATURE SENSOR ON DROP (TYPICAL) - SEE SCHEMATIC DRWG.

8. LOCATION OF NEW ENERGY METER PANEL (SEE SCHEMATIC DRWG FOR CONNECTIONS AND SENSOR LOCATIONS). MAINTAIN 3 FT CLEARANCE FROM MECHANICAL EQUIPMENT AND PIPING.

9. EXISTING ZONE CONTROL PANEL TO REMAIN WITH NEW CONNECTIONS TO NEW ZONE PUMPS.

10. REMOVE EXISTING BIRD SCREEN FROM EXISTING WALL LOUVER AND REPLACE WITH NEW REMOVABLE BIRD SCREEN WITH MESH SIZE NO SMALLER THAN ½-INCH.

11. TO BE PERFORMED BY OWNER: NEW FUEL OIL TANK ENCLOSURE IN ACCORDANCE WITH MA FIRE CODE AND REGULATIONS, AS WELL AS RELOCATION OF EXISTING FUEL OIL TANK, FILL AND VENT PIPING AND RECONNECTION TO EXISTING OIL FIRED BOILER.

12. SEE SCHEMATIC DRWG FOR CONNECTION OF INDIVIDUAL ZONES TO DISTRIBUTION SUPPLY/ RETURN HEADERS.

13. SEE SCHEMATIC FOR MAKEUP WATER CONNECTION DETAIL.

14. LOCATION FOR DISTRIBUTION PUMPS

Legend:

- PUMP
- MAGNETIC FILTER
- BUTTERFLY VALVE
- BALL VALVE
- SWING CHECK VALVE
- STRAINER
- DRAIN VALVE
- BALANCING VALVE
- ZONE VALVE

AFG ABOVE FINISHED GRADE
AFF ABOVE FINISHED FLOOR
N.C. NORMALLY CLOSED

Project:

TOWN OF NORTHFIELD
NORTHFIELD TOWN HALL
WOOD PELLET BOILER PROJECT

Drawing Title:

MECHANICAL ROOM PLAN

BOWMAN ENGINEERING, INC.
P.O. Box 410
GREENFIELD, MA 01302
PHONE: (413) 303-0238
FAX: (413) 604-0139

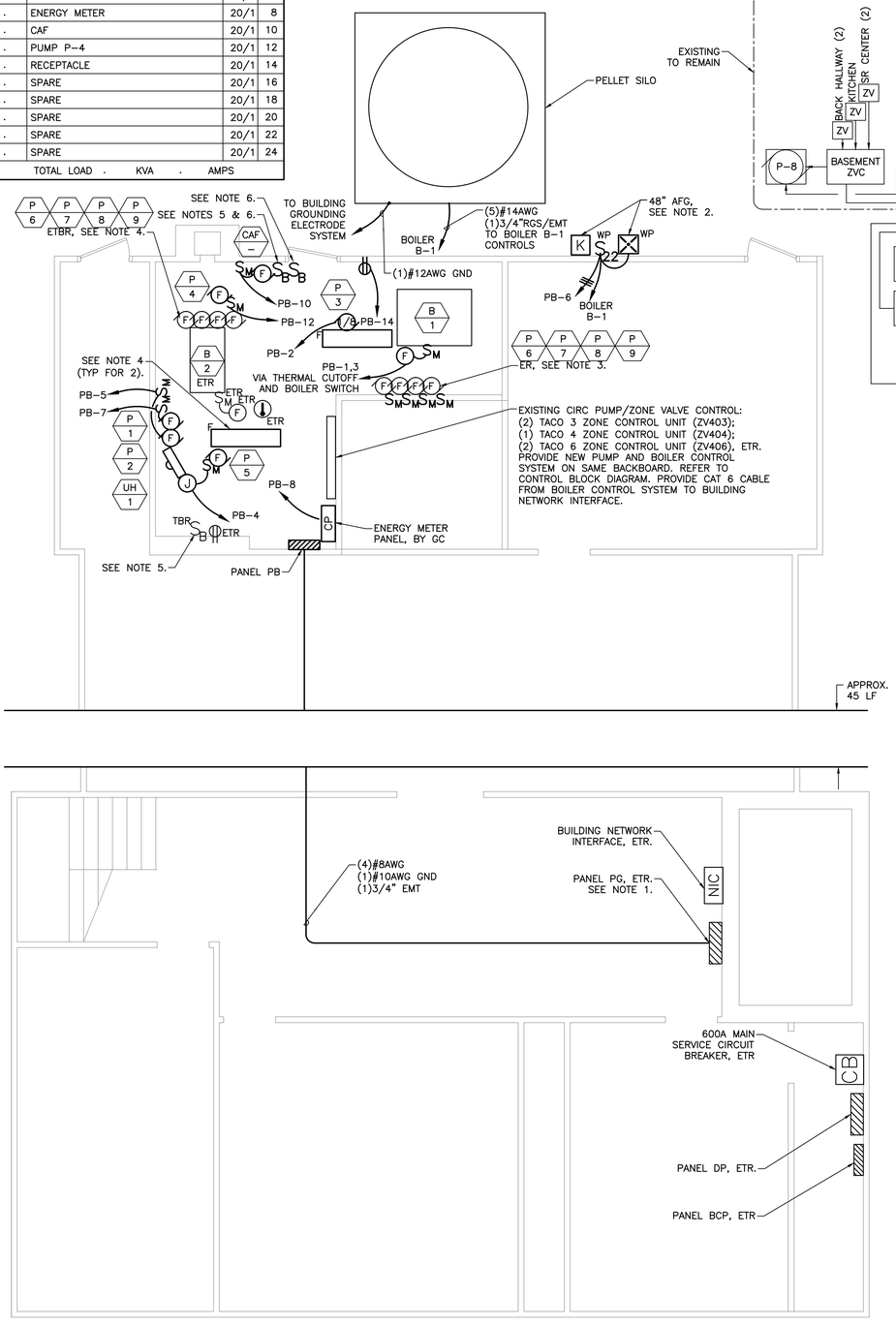
Prepared by:	Date	Rev.	Scale	Drawing No.
TPB	10-23-15	R00	AS NOTED	M-2

PANELBOARD SCHEDULE

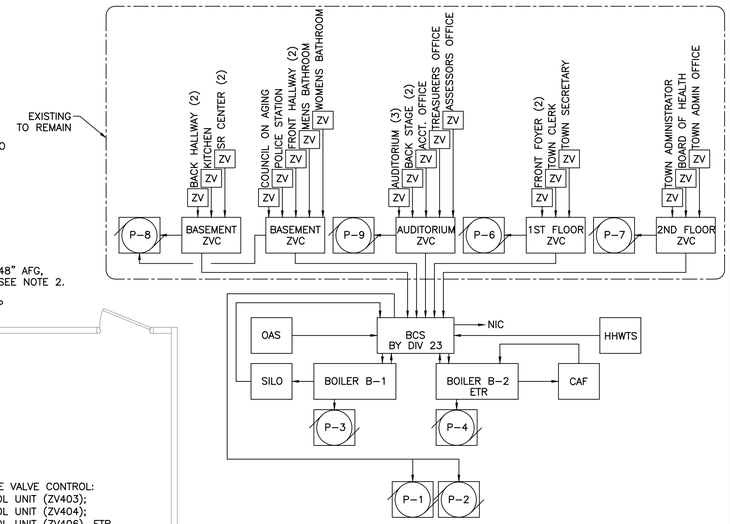
PANEL NO. PB

208Y/120 VOLTS 1 PH W 3 G# . MAIN CB 60A BUS 60A MIN. AIC 22K SYMM.

CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD (KVA)	PER PHASE (KVA) A	B	C	LOAD (KVA)	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
1	20/2	BOILER B-1	.	.	.	.	.	PUMP P-3	20/1	2
3	.	.	.	.	.	.	.	UNIT HEATER UH-1 AND PUMP P-5	20/1	4
5	20/1	PUMP P-1	.	.	.	.	.	BOILER B-1 STROBE	20/1	6
7	20/1	PUMP P-2	.	.	.	.	.	ENERGY METER	20/1	8
9	20/2	SPARE	.	.	.	.	.	CAF	20/1	10
11	.	.	.	.	.	.	.	PUMP P-4	20/1	12
13	20/2	SPARE	.	.	.	.	.	RECEPTACLE	20/1	14
15	.	.	.	.	.	.	.	SPARE	20/1	16
17	20/1	SPARE	.	.	.	.	.	SPARE	20/1	18
19	20/1	SPARE	.	.	.	.	.	SPARE	20/1	20
21	20/1	SPARE	.	.	.	.	.	SPARE	20/1	22
23	20/1	SPARE	.	.	.	.	.	SPARE	20/1	24
		TOTAL VA BY PHASE						TOTAL LOAD . KVA . AMPS		



BASEMENT PART PLAN
SCALE:1/4"=1'-0"



CONTROL BLOCK DIAGRAM
NO SCALE

DIAGRAM NOTES:
1. ALSO REFER TO SEQUENCE OF OPERATION UNDER DIVISION 23.
2. PROVIDE ALL WIRING AND CONNECTIONS FOR CONTROLS TO SUIT. ALL COMPONENTS (SENSORS, PUMPS, CONTROLLERS, FANS) PROVIDED UNDER DIVISION 23.

NOTES:
1. AT GENERATOR PANEL, PG, COMBINE THE ELECTRIC ROOM LIGHTS BRANCH CIRCUIT WITH THE ELECTRIC ROOM RECEPTACLE BRANCH CIRCUIT. REMOVE (1)20A/1P CIRCUIT BREAKER. REWORK CIRCUITS AS REQUIRED TO PROVIDE (1)50A/2P SQ D CIRCUIT BREAKER IN SPACE TO SERVE PANEL PB.
2. CONNECT EXTERIOR SWITCH TO POWER BOILER B1 WHEN IN THE UP POSITION, AND SHUT DOWN BOILER B-1 AND FLASH STROBE WHEN IN THE DOWN POSITION. LABEL SWITCH "BOILER 1 ON" IN THE UP POSITION, AND "BOILER 1 OFF" IN THE DOWN POSITION. PROVIDE ENGRAVED PLASTIC SIGN AT STROBE, 1" BLACK TEXT ON YELLOW BACKGROUND, 60" AFG, – "BOILER IS OFF WHEN STROBE IS FLASHING". LOCATE DEVICES AT PELLET FILL POINT.
3. DISCONNECT EXISTING CIRC PUMPS TO BE RELOCATED BY GC. EXTEND EXISTING BRANCH CIRCUIT AND CONTROL WIRING TO NEW LOCATIONS. ALTERNATE NO 1: GC TO REPLACE EXISTING CIRC PUMPS WITH NEW.
4. DISCONNECT EXISTING PORCELAIN SOCKETS IN BOILER ROOM, REPLACE WITH NEW 4' LED STRIP. COORDINATE LOCATION OF NEW FIXTURES WITH PROPOSED EQUIPMENT AND PIPING.
5. DISCONNECT AND REMOVE EXISTING EMERGENCY BOILER SWITCH FOR BOILER B-2. EXTEND BOILER B-2 BRANCH CIRCUIT WIRING TO NEW SWITCH VIA THERMAL CUT OFF.
6. PROVIDE NEW EMERGENCY BOILER SWITCH AS SHOWN FOR BOTH B-1 & B-2.
7. ADJUST ELECTRICAL WORK AS REQUIRED TO SUIT MECHANICAL EQUIPMENT AS PROVIDED BY OTHER TRADES.

BID SET NOT FOR CONSTRUCTION

0 2 4 8
SCALE: 1/4"=1'-0"

NANGLE ENGINEERING INCORPORATED
32 Prince Street
Danvers, MA 01923
Tel. (978) 777-7650

Notes:

GENERAL NOTES

1. ALL WORK SHALL COMPLY COMPLETELY WITH THE MASSACHUSETTS ELECTRICAL CODE, AND ALL LOCAL ORDINANCES AND REQUIREMENTS.
2. THE DRAWINGS ARE GENERALLY DIAGRAMMATIC. PROVIDE ALL MATERIAL, LABOR AND EQUIPMENT FOR COMPLETE AND OPERATIONAL SYSTEMS.
3. APPLY FOR AND OBTAIN ALL REQUIRED PERMITS. REQUEST, SCHEDULE, AND ATTEND ALL REQUIRED INSPECTIONS BY THE LOCAL AUTHORITY HAVING JURISDICTION.
4. REFER TO DRAWINGS AND CONFIRM EQUIPMENT LOCATIONS PRIOR TO ROUGH-IN. ADJUST ELECTRICAL WORK AS REQUIRED BASED ON EQUIPMENT PURCHASED/INSTALLED.
5. PROVIDE A ONE YEAR MATERIAL AND LABOR GUARANTY AGAINST DEFECTS IN MATERIAL AND WORKMANSHIP.
6. ALL MATERIAL INCORPORATED IN THE WORK SHALL BE UL LISTED FOR THE INTENDED USE.
7. VISIT THE SITE PRIOR TO SUBMITTING BID TO REVIEW SCOPE OF DEMOLITION, AND CONDITIONS UNDER WHICH NEW WORK MUST BE INSTALLED.

ABBREVIATIONS

2P	TWO POLE	HHWTS	HEATING HOT WATER TEMPERATURE SENSOR
A	AMPERE	LAN	LOCAL AREA NETWORK
AFG	ABOVE FINISHED GRADE	LFMC	LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT
AWG	AMERICAN WIRE GAUGE	OAS	OUTSIDE AIR SENSOR
B	BOILER	P	PUMP
BCS	BOILER CONTROL SYSTEM	PH	PHASE
BP	BOILER ROOM PANEL	RGS	RIGID GALVANIZED STEEL
CAF	COMBUSTION AIR FAN	TBR	TO BE REMOVED
CB	CIRCUIT BREAKER	TYP	TYPICAL
CO	CARBON MONOXIDE	UH	UNIT HEATER
DWH	DOMESTIC WATER HEATER	UNO	UNLESS NOTED OTHERWISE
EMT	ELECTRIC METALLIC TUBING	V	VOLT
ER	EXISTING RELOCATED	VA	VOLT-AMPERE
ETR	EXISTING TO REMAIN	W	WIRE
ETRR	EXISTING TO BE REMOVED AND REPLACED	WP	WEATHERPROOF
ETBR	EXISTING TO BE RELOCATED	ZV	ZONE VALVE
G,GND	GROUND	ZVC	ZONE VALVE CONTROL
GC	GENERAL CONTRACTOR		
GF	GROUND FAULT CIRCUIT INTERRUPTING		

Legend:

- PANELBOARD, AS SCHEDULED
- CB — MAIN CIRCUIT BREAKER, ETR
- (F) — MOTOR, NUMERAL INDICATES HP, F INDICATES FRACTIONAL HP
- S_M — MANUAL MOTOR STARTER WITH OVERLOAD PROTECTION 20 AMP, 1 POLE UNO
- S_{22} — DOUBLE POLE DOUBLE THROW SWITCH
- S_B — RED EMERGENCY BOILER SHUTOFF SWITCH, 20 AMPERE, 120/277 VOLT, SINGLE POLE SWITCH
- PB— — HOME RUN TO PANEL "PB", CIRCUIT WIRING AS BELOW
- CIRCUIT WIRING. INDICATES (2)#12AWG, (1)#12AWG GND, (1)3/4" EMT, UNO
- J (J) — JUNCTION BOX, SIZE AS SHOWN OR PER CODE
- NEMA 5-20R DUPLEX RECEPTACLE
- 110 VOLT STROBE, WEATHERPROOF, WHITE BEZEL, NO MARKING
- K — KEY VAULT
- F — LED INDUSTRIAL STRIP, COLUMBIA CAT. NO. LCL4-35HL-EU-CSHC, OR EQUAL BY LITHONIA OR DAY-BRIGHT
- (F) — THERMAL CUT-OFF SWITCH, 165°, UNO
- HEAT DETECTOR, 195°
- LINEWEIGHT DENOTES EXISTING
- LINEWEIGHT DENOTES PROPOSED

Project:

TOWN OF NORTHFIELD
NORTHFIELD TOWN HALL
WOOD PELLET BOILER PROJECT

Drawing Title:

ELECTRICAL PLAN

BOWMAN ENGINEERING, INC.
P.O. BOX 410
GREENFIELD, MA 01302
PHONE: (413) 303-0238
FAX: (413) 604-0139

Prepared by:	Date	Rev.	Scale	Drawing No.
CWN	10-28-15	D00	AS NOTED	E-1

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Structural Design Criteria

1. Code: Massachusetts State Building Code - Eighth Edition
2. Foundation designed for Brock 9ft dia. 3-ring, 60 deg hopper wood pellets silo with 6 supporting legs based upon base reactions provided by Brock Grain Systems.
   - A. Total vertical load on foundation (D+L) 37,302 lbs
   - B. Leg loads:
     - i. Maximum Leg Compression (D+L) 6,217 lbs
     - ii. Maximum Leg Uplift 1,377 lbs
   - C. Base Shear
     - i. Wind 2,124 lbs
     - ii. Seismic 3,054 lbs
   - D. Overturning Moment
     - i. Wind 21,279 lb-ft
     - ii. Seismic 39,441 lb-ft
   - E. All leg baseplates shall be a minimum of 3"x7.625"
3. Silo anchor bolt design is the responsibility of the silo manufacturer.
4. Conveyor and other equipment attached to the silo shall be flexible enough to absorb any frost action.

Foundations:

1. The design of the foundation is based upon assumed soil conditions. Contractor shall expose and verify the capacity of the existing bearing material.
2. All footings shall be founded on natural undisturbed material or upon compacted structural fill having a minimum safe bearing capacity of 2,500 psf.

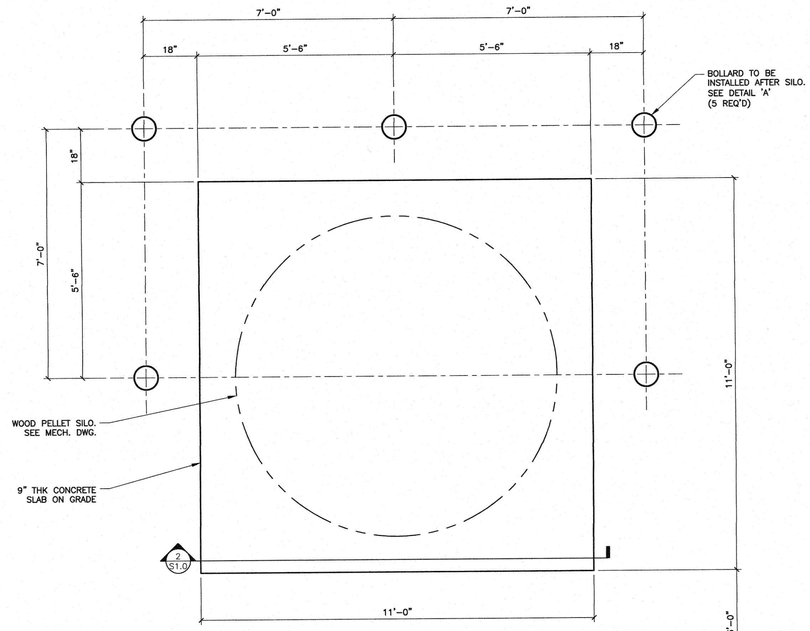
   Structural fill shall be placed over the natural undisturbed material in 8 inch lifts compacted to 95% of maximum dry density, per ASTM D1557.

   Contractor shall engage an independent testing agency to perform the soil testing in accordance with ASTM D1556 or D6938.

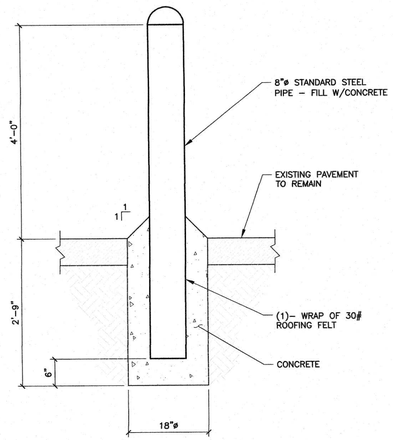
   Field tests shall be performed at a rate of one (1) test per 100 square feet, with a minimum of one (1) per lift.
3. Where suitable undisturbed material is found higher or lower than shown on the plans isolated footings may be lowered or raised and piers, added, increased, or reduced in height with prior review and approval by the Structural Engineer.
4. Contractor shall safeguard all excavations from freezing, rain, ground water. No foundations shall be placed in water or upon frozen ground.
5. The equipment foundation shall be centered under the equipment supported, unless otherwise noted.

Concrete:

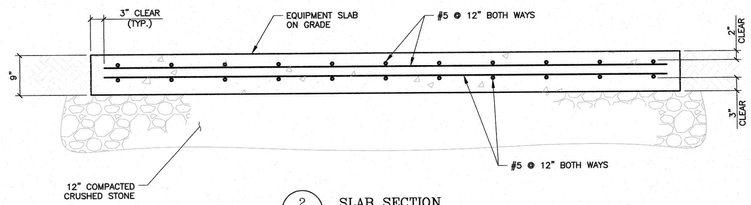
1. All concrete shall be mixed, placed, cured, and tested in accordance with ACI 318 except that provisions of the specification prevail where more stringent.
2. Concrete shall be normal weight with a minimum compressive strength at 28 days of 4,000 psi with 5% to 7% air-entrainment and a maximum slump of 4"
3. Use of calcium chloride containing aggregates or admixtures is not permitted.
4. All reinforcing steel shall be deformed bars conforming to ASTM A615 (Grade 60) unless otherwise noted. Bar sizes, nominal bar diameters, and nominal cross-sectional areas shall conform to ACI 318.
5. Minimum concrete cover shall be provided for reinforcement in accordance with ACI 318, unless otherwise noted.
6. Splicing or welding of reinforcement is not permitted.
7. All concrete shall be cast monolithically without construction joints.
8. Contractor is responsible for proper and adequate shoring of all concrete work including form work, ties, reinforcing chairs, standees, etc.
9. Aluminum items shall not be placed in concrete.



1 S-1 11'x 11'x 9" SLAB PLAN
1/2" = 1'



A S-1 BOLLARD
3/4" = 1'



2 S-1 SLAB SECTION
3/4" = 1'

COMMONWEALTH OF MASSACHUSETTS ERIC R. WEAK No. 42010 REGISTERED PROFESSIONAL ENGINEER

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www.sfcengr.com

No.	Date	Revision	By

Northfield Town Hall
Wood Pellet Boiler Project
Foundation for 9' Diameter Silo

Project No. 624601 | Scale: As Noted
Date: 10/20/2015 | Designed by: ERK | Drawn by: DMF | Checked by:

Prepared for:
Bowman Engineering, Inc.
P.O. Box 410
Greenfield, MA 03102

DWG NO.
S-1

624601-S1.dwg

Drawing name: M:\ST\624601 Bowman-Northfield MA\AutoCAD\624601-S1.dwg